

REMARKS

Claims 1-17 and 19-42 are currently pending in the above-referenced patent application. Claims 5 and 10 are amended, claim 18 cancelled, and claims 22-42 newly added by way of the present amendment.

In the Office Action: Claim 10 was objected to because of an informality. Claim 5 was rejected under 35 U.S.C. §112, second paragraph. Claims 1 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by Chalmers (U.S. Patent No. 5,640,416). Claims 10-13, 20, and 21 were rejected under 35 U.S.C. §102(e) as being anticipated by Efstathiou (U.S. Patent No. 6,504,867). Claims 2-4, 14-17, and 19 were objected to as being dependent upon a rejected base claim. Claims 6-9 were allowed.

In response to the objection of claim 10, because of an informality, the Applicant respectfully requests reconsideration. Claim 10 has been amended to overcome the objection.

In response to the rejection of claim 5 under 35 U.S.C. §112, second paragraph, the Applicant respectfully requests reconsideration. Claim 5 has been amended to overcome the rejection.

In response to the rejection of claims 1 and 5 under 35 U.S.C. §102(b) as being anticipated by Chalmers, the Applicant respectfully requests reconsideration. These claims recite an analog-to-digital converter device that converts an intermediate frequency into

a digital signal and provides a quadrature component and an in-phase component of the digital signal.

Chalmers relates to a digital downconverter/despreadr for a direct sequence spread spectrum communications system. It is disclosed in column 7, lines 41-44 that A/D converter 406 samples IF signal 416. It is further disclosed that the output of A/D converter 406 is processed in custom digital IC 408. Specifically, it is disclosed in column 8, lines 22-23 that A/D converter 406 produces an aliased spectrum. An aliased is not a digital signal. In column 7, lines 56-60 it is disclosed that the downcoverter/despreadr IC 408 processes the aliased spectrum to output digital data symbols. Accordingly, unlike the recitations of claims 1 and 5, A/D converter 406 does not convert an intermediate frequency into a digital signal. This is evident and apparent, as the output of A/D converter 406 is an aliased spectrum, as shown in Figure 6(b) of Chalmers. Figure 6(b) of Chalmers is not a digital signal.

A/D converter 406 also does not provide a quadrature component and an in-phase component of the digital signal. This is evident and apparent, as it is disclosed that downconverter/despreadr IC 408 outputs in-phase and quadrature symbols from the output of A/D converter 406. In other words, downconverter / despreadr IC 408 produces in-phase and quadrature symbols from an aliased signal and not from a digital signal. At least for these reasons, Chalmers does not disclose the recitations in claims 1 and 5 of an analog-to-digital converter device that converts an intermediate frequency signal into a digital signal and provide

a quadrature component and an in-phase component of the digital signal. At least for this reason, a *prima facie* case of anticipation has not been established.

In response to the rejection of claims 10-13 and 20 under 35 U.S.C. §102(e), the Applicant respectfully requests reconsideration. Claim 10 has been amended to incorporate the recitations of cancelled claim 18. On page 4 of the Office Action, claim 18 was "... objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." Accordingly, claim 18 has been rewritten in independent form, by incorporating the recitations of claim 18 into independent claim 10. In accordance with the amendment to claim 10, the Applicant respectfully requests withdrawal of the rejection to claims 10-13 and 20 under 35 U.S.C. §102(e) as being anticipated by Efstathiou.

In response to the rejection of claim 21 under 35 U.S.C. §102(e) as being anticipated by Efstathiou, the Applicant respectfully requests reconsideration. This claim recites an analog-to-digital converter to convert an intermediate frequency CDMA signal to an intermediate digital signal and a channel separator to generate first and second digital signals based on the intermediate digital signal.

Efstathiou relates to digital matched filtering for signal estimation in a digital receiver. In Figure 1 and the accompanying description in column 3, lines 41-43, it is disclosed that analog -to-digital converter (ADC) 28 provides a wide band digitized signal on line 29. However, unlike

the recitations of claim 21, ADC 28 is not disclosed as having a channel separator. This is evident and apparent, as it is disclosed in Figure 2 and the accompanying description in column 3, lines 55-64 that tuner 30 is configured to provide an in-phase and quadrature signals. Accordingly, ADC 28 does not have a channel separator, as tuner 30 provides the function of providing in-phase and quadrature signals. At least for this reason, a *prima facie* case of anticipation has not been established.

The Applicants respectfully request favorable consideration of newly added claims 22-31. These claims recite a method. The method comprises converting an analog signal to a digital signal in an analog-to-digital converter. The method further comprises separating components of the digital signal from the digital signal in the analog-to-digital converter. The Applicant respectfully submits that the applied prior art does not disclose these recitations.

The Applicant respectfully requests favorable consideration of newly added claims 32-41. These claims recite an apparatus. The apparatus is configured to convert an analog signal to a digital signal in the analog-to-digital converter. The apparatus is further configured to separate components of the digital signal from the digital signal in the analog-to-digital converter. The Applicant respectfully submits that the applied prior art does not disclose these recitations.

The Applicant respectfully requests favorable consideration of newly added claim 42. Claim 42 recites an apparatus comprising an analog-to-digital converter. The apparatus

further comprises a means for converting an analog signal to a digital signal in the analog-to-digital converter. This claim also recites a means for separating components of the digital signal from the digital signal in the analog-to-digital converter. The Applicant respectfully submits that the recitations of this claim are not disclosed in the applied prior art.

The Applicant wishes to thank Examiner Ghulamali for the indication that claims 2-4, 14-17, and 19 are allowable and that claims 6-9 are allowed. The Applicant recognizes the "statement of reasons for indication of allowable subject matter" on pages 4-7. However, the Applicants cannot acknowledge these statements for the purposes of prosecution history estoppel, as the statement does not correspond word-for-word with the recitations of the claims.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, Daniel H. Sherr, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



Daniel Y.J. Kim
Registration No. 34,596
Daniel H. Sherr
Registration No. 46,425

P.O. Box 221200
Chantilly, VA 20153-1200
703 502-9440 DYK/DHS/czr:tmd
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